

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

Claims 1-49. (Cancelled).

50. (New) A radio communication device in whose communication area another radio communication device operates, comprising:

a detection section that detects an operation of the other radio communication device during a time slot, the time slot being used at a high priority by the radio communication device, within the communication area of the radio communication device; and

a contention resolution section that performs contention resolution processing when the detection section detects an overlap based on the other communication device operating during the time slot, said contention resolution section comprising:

a time slot dividing section that divides the time slot into a plurality of slots, and
a slot setting section that sets one of the plurality of divided slots to the radio communication device as a higher priority slot, and sets another of the plurality of divided slots to the other radio communication device as a lower priority slot.

51. (New) The radio communication device according to claim 50, wherein the radio communication device detects a number of other radio communication devices operating in the communication area, and the time slot dividing section divides the time slot based on the number of other detected radio communication devices.

52. (New) The radio communication device according to claim 50, wherein the contention resolution section comprises an exchanging section that exchanges identification information of the radio communication device with identification information of the other radio communication device, and the slot setting section is so arranged as to select the higher priority slot which can be used at a higher priority by the radio communication device, based on a comparison result of the identification information of the radio communication device with the identification information of the other radio communication device.

53. (New) The radio communication device according to claim 50, comprising a time slot identification information sending section that sends identification information of the higher priority slot to the other radio communication device, so that the other radio communication device selects the lower priority slot based on the identification information of the higher priority slot.

54. (New) The radio communication device according to claim 50, further comprising a higher priority communication section that accesses a wireless medium in the higher priority slot, using a waiting time shorter than another waiting time used for the other radio communication device.

55. (New) The radio communication device according to claim 54, further comprising a lower priority communication section that accesses the wireless medium in the lower priority

slot, using the other waiting time which is longer than the waiting time used for the radio communication device.

56. (New) The radio communication device according to claim 50, wherein the time slot division section is so arranged as to divide a communication period corresponding to the time slot evenly into the plurality of slots, the communication period having a common period which is determined among the radio communication devices.

57. (New) The radio communication device according to claim 56, further comprising a synchronization section that synchronizes with the other radio communication device regarding the common period.

58. (New) The radio communication device according to claim 50, wherein the radio communication device detects a number of other radio communication devices operating in the communication area, and the time slot division section is so arranged as to divide the time slot into a plurality of equal width slots by dividing the time slot by a factor of 2^N , wherein N is an integer equal to or greater than the number of other detected radio communication devices.

59. (New) The radio communication device according to claim 50, wherein the radio communication device detects a number of other radio communication devices operating in the communication area, and further comprises a time slot resetting section that resets the time slot by decreasing the divided slots in the time slot based on the number of the other detected radio

communication devices, when the detection section detects that the other radio communication device, which uses the lower priority slot, shuts down.

60. (New) A radio communication method being performed by a radio communication device in whose communication area another radio communication device operates, comprising:

detecting an operation of the other radio communication device during the time slot, the time slot being used at a high priority by the radio communication device, within the communication area of the radio communication device; and

performing contention resolution processing when the communication device detects an overlap based on the other communication device operating during the time slot,

wherein the radio communication device divides the time slot into a plurality of slots, has priority use of one of the plurality of divided slots in the time slot as a higher priority slot, and sets another of the plurality of divided slots to the other radio communication device as a lower priority slot.